

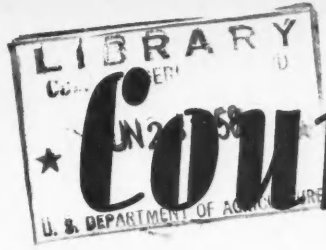
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Cornell Countryman

May, 1958

55/8 Our 54th Year



Cornell Scientist: Social Critic & Botanist See Story on Page 4

T*here are plans that I must draw.*

Then let this timid hand of mine
Be guided, line for line,
With that steady, certain trueness
Of the Hand that planned
This universe.

There are materials I must choose.

Then let this casual mind of mine
Choose with the wisdom of the Mind
That fixed the substances
Of things like grass and trees
And mountain peaks.

There are decisions I must make.

Then let me make them with that sureness
That divided land and sea,
And day and night, the birds that fly
And beasts that roam the field.

I've a future I must build

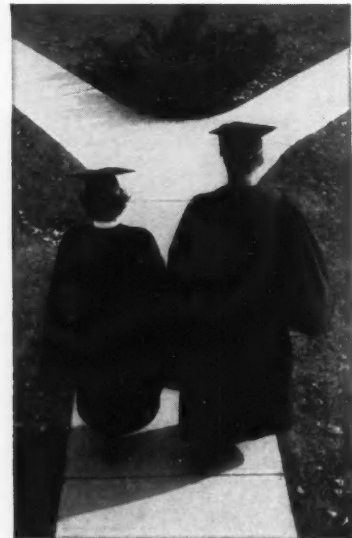
There's a determination I must have.

Then let me bind myself unto such things
As principles, and truth, and right
With that same permanence
That holds in their celestial places
The sun, and stars,
And all the heavens' gems.

I've a future I must build.

So, let me build it with such care,
Such tools, such wisdom,
And with such a rugged firmness,
That all the fiercest thrusts
Of host or elements
Cannot destroy it.

Aye, I've a future I must build . . .
Let me rise, then, to the task!



JOHN DEERE • MOLINE, ILLINOIS

Cornell Countryman

Vol. LV—No. 8

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MAY, 1958

May Memorandum

Our Athletic Department is well stocked with tennis, badminton, softball, and baseball equipment for these balmy May Days.

* * * * *

The Gift Department is featuring Cornell mugs for springtime beer parties; mascots, pennants, banners, and other souvenirs to take along when you go home.

* * * * *

The Co-ed Shop calls your attention to their fine selection of bermuda shorts, shirts, cotton skirts, and blouses for campus and vacation wear.

Cornell Campus Store

Barnes Hall

For the Best Pizza!



go to

JOE'S

602 W. Buffalo St. phone 4-9039

The



Story:

EXTRAS FOR LIVESTOCK MARKETERS!

From month to month, we've told you about the many direct benefits offered to New York State farmers and dealers who market their livestock through the nine weekly livestock commission auctions operated by Empire Livestock Marketing Cooperative.

But Empire provides many indirect benefits to all who earn a living from livestock in the Empire State.

Empire's leadership in selling slaughter livestock by weight over tested scales, its widespread and honest reporting of prices per hundredweight actually paid for livestock, and its fair and impartial treatment of all buyers and sellers alike has resulted in a demand on the part of the livestock industry for universal adoption of these policies on the part of all non-Empire commission auction markets also.

These indirect benefits to all the livestock industry are one more reason why thousands of consignors find that "it's good business to do business with . . .

EMPIRE Livestock Marketing Cooperative

Livestock Auction Markets at

Bath — Bullville

Caledonia — Dryden

Gouverneur — Greene

Oneonta — Watertown

West Winfield

Editorials

Cornell's Freedom Has A Purpose

THIS issue of the Cornell Countryman is featuring an article on large universities as another in its series on education. This article, in general, finds fault with the bigness of universities and the emphasis on social life.

Let's take a look at Cornell as one of these large universities. There is no denying that Cornell is big and that it has a complex social system. Yet, we find it almost impossible to generalize about Cornell.

One segment of the student body may emphasize social life too much. Yet, there is always the other side at the opposite extreme and the medium which has a balance between social and academic life.

Sororities and fraternities, although present, don't necessarily rule Cornell. Stereotypes do exist about certain segments of the student body. Yet, if we even began to add all these stereotypes up on every portion of the student body we'd have an endless list.

What all this adds up to is the student—he can be what he wants to be at Cornell because Cornell is big enough to let him.

Cornell is as much like the "outside world" as a university can possibly be. It is so diverse in its student body and faculty, so diverse in its social structure, so diverse in its educational offerings that generalizations can not be made.

Cornell doesn't offer its students a neat little package of security; the students have to find their own. They have to meet the same social pressures they would meet in the "outside world." However, here they can make mistakes finding security; whereas in that "outside world," one mistake can often be disastrous.
—B.L.D.

To The Top

"THAT looks like a path.
Is that the way to reach the top from here?"

So asks Robert Frost; so ask Cornellians.

Some of us have been asking for four years and are about to find out. Others of us have just begun to ask, just begun to notice the paths available.

To those who are leaving, the Countryman staff wishes a pleasant and successful journey. Perhaps your way is the way to reach the top from here. But, whether it is or not, climbing is always good exercise. Your pack is full—lots of luck.

To those who are just going to look over the paths, we wish clear weather for good scouting, and hope that you will come back next fall with a clearer view of the top and a more complete map of the mountainside paths.—J.H.B.

Editorials

A Plea for Conservation Action

NEEDED for the preservation of our natural resources has never been so great. All about us is the exploitation and resulting destruction of habitats once capable of supporting numerous forms of wildlife. Many factors are responsible for this so-called progress. Population growth and an unequaled prosperity have put a demand upon land which, unless preserved—either by law or by philanthropy—will not long remain in its natural state.

Agriculture has its fingers in this pie of progress. Wetlands not even needed for farmland have been drained and tilled. Excessive grazing on public land in the west has left little, if any, native grass. Woodlands once filled with the noises of wildlife now resound with the buzz of the lumberman's power saw. These and many other activities will leave this country devoid of the beauty enjoyed by this and past generations.

Destruction of the nation's wetlands, for example, has continued until a pitifully small portion of these necessary haunts of our waterfowl remains. Out of an original 120 million acres of wetlands, only 22.5 million are left. On the east coast, a mere 240 miles of our 3,700 mile long coastline is in public ownership. The rest is doomed to drainage and "improvement"—unless action to preserve it occurs immediately.

Who plans to take such action? We wish there was an answer to that question. Federal government funds will enable acquisition of only 7.5 million acres of shoreline. There remains one possible solution to this problem. The success of this solution, however, depends upon whether or not certain clubs and organizations will take their heads out of the sand and realize that that very sand may be planned for a housing project along some scenic beachfront.

In a country abounding in bird clubs, garden clubs, sportsmen's clubs, and other nature organizations, there is no excuse for vanishing natural resources. Laxity in this predicament stems mainly from a distortion of purpose. Most of these clubs are satisfied with giving their members a program of conservation entertainment and education, omitting the actual conservation which is needed.

CORNELL offered a prime illustration of this last season. Five beautiful wildlife films were shown as another of a series of Audubon Screen Tours. The films were narrated by men who are leaders in natural history and photography. Near capacity audiences filled the lecture room at each presentation. But, absolutely nothing was accomplished toward conserving our natural heritage. The films served no more of a purpose than Walt Disney's True Life Adventure series. Here again, education and entertainment were substituted for conservation.

This is not unusual for the National Audubon Society. With 12.5 million acres of wetlands needed for our waterfowl, the society controls only one million acres of land and water combined. Certainly, if a larger portion of their \$750,000 annual budget was devoted to acquiring more sanctuaries and preserves, instead of telling people how wonderful our woods and wildlife are, we would not see these resources disappearing.

If all the nation's nature clubs and organizations would devote more time and funds to actual conservation, the diminishing trend of our forests, wetlands, and game could be halted. Conservation action is needed now. Don't let our nation's beauty become mere history. Let's stop talking about conservation and start acting. —W.H.W.

Empire Breeders For Better Livestock

BROWN-SWISS

HI-HO FARMS

Darien Center, New York
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Who serves the Best Food?



AL'S DAIRY BAR

321 College Avenue



Farm Research

An associate fractionates one of the liquids vital to Dr. Steward's research project.

Cornell Scientist: Social Critic and Botanist

By JILL H. BECKOFF '61

"UNIVERSITIES can not be wholly democratic. If they are, they cease to be universities. A true university represents an oligarchy of scholarship based not only upon tolerance, but upon intolerance: intolerance of stupidity, intellectual laziness, and sloppiness. Education is not only for the masses, but a privilege for those who can use it." These strong words came from Dr. F. C. Steward, a mild-mannered scientist and botany professor here at Cornell.

"American education is aimed at the least common denominator. It should be aimed at the top ten per cent, not the bottom. In that way, the entire class is pulled up instead of down. Students should be made to exert themselves intellectually just as they would physically if they were training for athletics."

Dr. Steward believes that "a university is a grown-up place for grown-up people" and that when one is attending a university, he has left his school days behind him and should be concentrating upon "the fastidious cultivation of good taste—in speech, dress, scholarship, every sphere of life."

Along with his studies, the student should learn to live according to the standards of his society. No need should arise for university rules which are different from those of the world outside.

When asked, Dr. Steward also ex-

pressed the opinion that the main difference between American and European students is that the latter "reach a greater level of intellectual maturity earlier."

Because of this maturity, the European students can be taught at a more adult level. "American students are spoon-fed too much. Even at the freshman level they are talked down to much of the time."

Dr. Steward speaks from experience. He was born, raised, and educated in England, and has taught in the United States for about ten years. He first came to this country in 1927 as a Rockefeller fellow and has been commuting back and forth across the Atlantic ever since.

Recently, Dr. Steward has found it possible to take carrots apart and put them back together again. "We found that we could grow cells free from the rest of the plant and then found that they could be made to grow back together and form the whole plants."

Dr. Steward and his assistants have found that, in a culture of coconut milk and certain nutrients, free carrot cells reorient themselves and begin to act in a manner resembling carrot zygotes. Transferred to an agar medium, these carrot cultures form structures resembling pro-embryoes which then develop roots, stems, leaves, and all the other organs essential to a plant and, from all available evidence, are perfectly normal plants.

We have no pure strain of carrots at present but this method, though tedious, may be one way of getting one. Developing a pure line of carrots, however, is not the main aim of the experiments. It is hoped that some idea can be gotten of what makes cells grow, especially those which grow wildly and unexpectedly.

Cells used are from the secondary phloem of the carrot root, a portion of the plant made up of mature cells which have ceased to divide. When placed in coconut milk, these cells are rejuvenated and begin to divide and multiply again. This is essentially what happens when a tumor forms. For this reason the National Cancer Institute is helping to sponsor Dr. Steward's work.

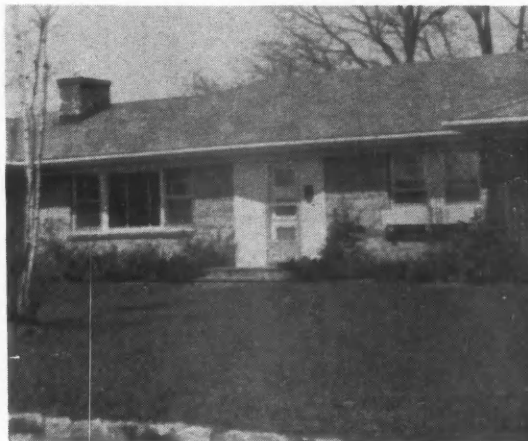
A group of laboratories in the basement of Plant Sciences houses Dr. Steward's experiments. One room down there is filled with flasks attached to revolving wooden discs (see cover picture.) In these flasks are the coconut milk and the carrot cells. Hour after hour, day after day, the wheels turn, bathing the cells in milk part of the time and exposing them to filtered air the rest of the time.

Transplants on an agar medium are housed in a nearby air conditioned room. In still another room, there is a complex machine made up of hundreds of interconnected glass tubes which automatically fractionates the various liquids being studied.

Migrating City Dwellers Invade Farmlands

Movement from city
to country is
on the rise.

An ex-city dweller's home in the country.



By LOUISE MOHR '60

FARMLANDS are under invasion by an army of migrating city dwellers. This shifting segment of the population is changing the once peaceful and serene fringe areas into fast moving, culturally advanced living communities. Dr. W. A. Anderson, Professor of Rural Sociology at Cornell University, states that this movement is having a serious influence, both adverse and favorable, on the rural areas. Changes occurring within these rural environments will affect the future choices of homes made by both older and younger couples.

The push to bring the urban and rural areas closer in contact has been the force behind this "flight to the fringe." As stated by Dr. Anderson, the most important factors in the movement have been the improvement of roads, the growth of transportation means, and the expansion of technology all over the United States. People desire to escape the noise and dirt of urban areas to enjoy the refreshing, healthful country atmosphere. Whether this rural atmosphere will last is a question only to be answered by time.

With the growing housing developments and industry gaining strong footholds, the agricultural way of life, although desired by city inhabitants, is changing. In 1954, 60 per cent of all building permits issued in the United States were for suburban territory. Industry's shift to the wide open spaces is just as profound.

Certain advantages of this movement can not be denied. Farmers' incomes, supplemented by part-time factory jobs, have enabled increasing living comfort. Conveniences

once only present in city areas have been made available to the agriculturists. One such development has taken place in education. No longer does the one-room school house dominate the scene. These communities now provide modern schools for both farm and city children.

However, all has not been good. Land values have now attained heights well out of the reach of many people. Taxes (perhaps for those new schools) burden the pocketbooks of both food producers and newlyweds striving to make ends meet. Housing quality has deteriorated in these mass production living units to meet the flight to the fringe.

Another effect of the growing rural area is the change of occupations. Today, 75 per cent of the employed males work in occupations other than farming. Quite a different picture than that of twenty years ago.

This produces a situation, explains Dr. Anderson, in which a smaller number of persons assume a growing importance in the operation of our society. Also as the nation's economic picture becomes questionable, so does the industrial ability to continue supplying these young men with jobs.

There is no denying that the movement to the fringe has had a decided effect on the culture of the American society, especially on the social structure of the rural area. Whether this structure will be weakened or strengthened by the invading city forces remains to be answered only by experience. There is, however, no doubt that this experience is well underway across America's farmlands.

Let's Study in Scandinavia

by michael d. marien '59

MOST students have probably heard the phrase "Junior Year Abroad," but have probably never pictured themselves in this situation. Language barriers, limited finances, potential loss of credits, and just plain laziness are some of the reasons that keep students from investigating these new horizons.

the Danish, Swedish, or Norwegian language and the Scandinavian customs prior to his arrival.

The second phase is the preliminary period in Scandinavia. Here the student has two community stays, one urban and one rural, in selected homes in the country of his choice. These stays last three to four weeks

satisfying and socially more meaningful lives."

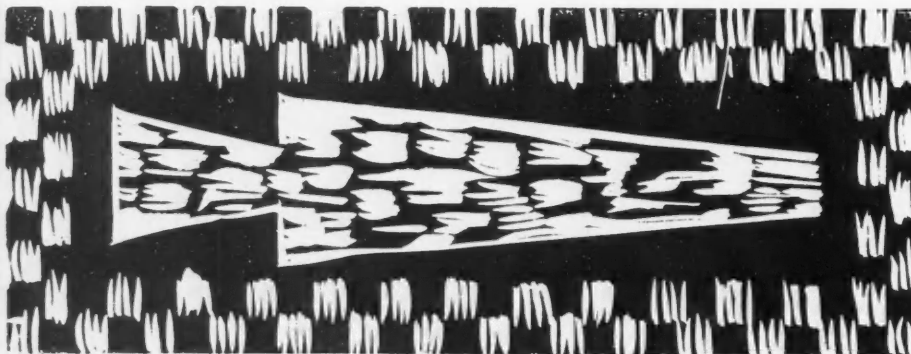
The idea of folk school education was formulated more than 100 years ago. There are no exams or degrees, and thus the student's motive in attending is a desire to learn. There are about 300 "Folkschools" throughout Scandinavia, in addition to regular institutions of higher learning. All of the "Folkschools" maintain small enrollment (50-100 students) in order to cement the student-faculty relationships in a close community. Each college has its unique characteristics and may emphasize particular areas.

After the residence at the folk schools there is a concluding session in which all of the Seminar students judge and evaluate the year's work.

Although he has only completed half of his stay, Guy Burns (who is in Denmark) can already sense that "leaving the country will be a struggle. The Danes are a friendly people and they have gone out of their way to help me and the rest of the students. For a year, their homes are our homes, their culture is our culture, and their different language is my headache!"

An experience abroad is not unachievable because, although a knowledge of a Scandinavian language is helpful, the willingness to learn is the only prerequisite. Total expenses average about a moderate \$1500 and college credit is given for the year.

In a special letter to the Countryman, Guy Burns asked: "Why don't you think a bit on this opportunity of a life-time? Professor Hertel (Secretary of the College of Agriculture) has more information on the Seminar as to the costs, courses, references, and application forms."



Gretchen A. Wise '59

But a little initiative in the direction of foreign study can pay off, as shown by the letters of Durwood Guy Burns '59 and William Zucker, Grad., Cornell's contribution to the group of 55 American students who currently are participating in the Scandinavian Seminar for Cultural Studies.

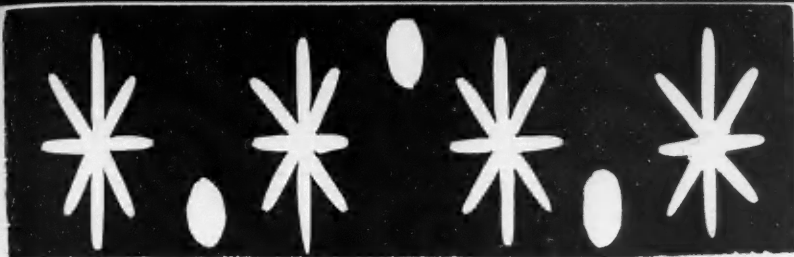
The recently organized Seminar is a program in which a junior, graduate, or interested professional person may travel to any Scandinavian country to live and study for a year.

Integration with another culture stimulates "thought and interest in basic problems which face man as an individual and as a group member."

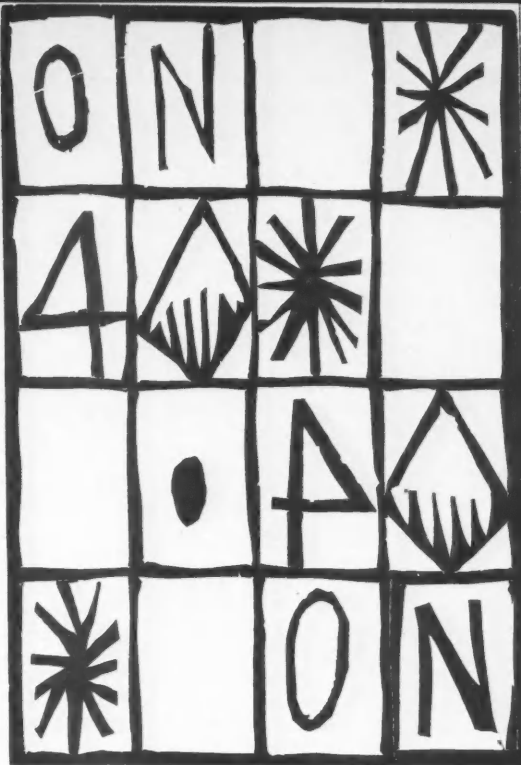
The year's program is divided into four parts. The first, the preparation period, enables the student to learn

and are designed to give the student an insight into the life of the people. Bill Zucker wrote that the stay "... allowed time to learn the language from the horse's mouth, so to speak, as well as an opportunity to experience family and community life." Special short orientation courses are given before, during, and after the community stays.

After the stays, the meat of the program is ready for consumption, and the student spends 22 weeks at one of the residential colleges known as "Folkschools." The philosophy of the Scandinavian folk schools is that "educational experience, rather than being one aimed primarily at the acquisition of knowledge, should be one that develops the human qualities and insights that make for individually



Block Printing— Doodlers' Delight



Gretchen A. Wise '59

by gretchen a. wise '59

ANYONE who can peel a potato or sharpen a pencil can carve a linoleum block. There are no limits to what a steady hand, patience and a good imagination can do. Block printing is inexpensive and requires few tools, all readily obtainable.

The materials should cost no more than \$5. Here is a list of essentials: pencil and eraser, tracing paper, box of pins or tacks, linoleum cutters, brayer (ink roller), a piece of plate glass to roll the ink on, ink (or oil painting colors and a commercial mixer to set the colors), linoleum blocks or battleship linoleum, newspapers, soap, turpentine, rags and other cleanup equipment, and finally plain fabric.

There are many suitable fabrics. Unfinished and untreated cottons are the best. Others are silk, crepe de chine, dull linen-like rayons, nylon,

challis (wool), and organdy. An old colored sheet would be wonderful to experiment on and takes a print well.

A design must be simple and direct to print well—not to mention the fact that fine lines, curves, and little circles are nearly impossible to cut. There are three ways to cut the design into the block. The first and the easiest method is cutting directly into the block. This is fun and the resulting print may be surprisingly good. The second is drawing on the block, then cutting out the design. The last produces the best results. First you transfer the design to tracing paper with a soft lead pencil. Then place the paper, design side down, on the block and retrace the design with a sharp, hard lead pencil. You will get an exact reproduction of the original design. Now you are ready to carve.

Next you must prepare the cloth for printing. First it must be washed to remove the sizing, or it will not take a print. Then it must be pressed and cut to a convenient size for handling. If you are doing a repeat pattern, the pattern must be marked with pins or chalk. The material will print better if it is slightly damp and padded with a layer of newspapers. This is especially important if you are using blocks instead of unmounted battleship linoleum. The latter is resilient and prints more evenly.

Ink mixing is fun. Just squeeze a generous glob onto the plate glass.

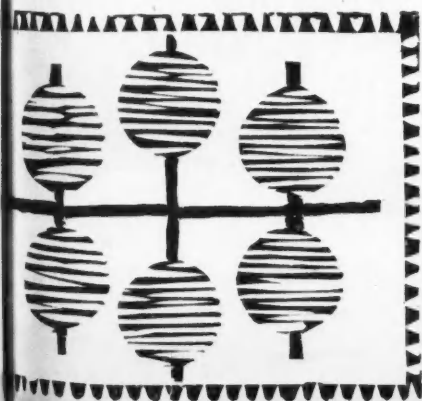
Then roll the brayer back and forth in the ink. The ink should have a sticky or "tacky" consistency. If you are using oil paints instead of regular printing inks, you will have a wider range of colors, but you will have to add a mixer to them to keep the color from bleeding. Now roll the brayer over the block with an even pressure. New blocks will not take paint well at first, but will print better with use. At last you are ready to print.

Lay the block face down on the cloth. Press or pound firmly. The harder you hit the block, the better the print will be. Don't worry—the blocks are sturdy and this is standard procedure. Remember that smooth absorbent fabrics require less pressure and ink than rough materials.

The ink takes from five to ten days to dry. To test the cloth, rub the design. It won't smudge if it is dry. To set the print, lay it face down on absorbent paper and press with a warm iron. Then reverse the cloth and cover it with a damp cloth. Press it dry. Now the cloth is ready to be used. The colors will not run or fade.

As you gain more experience, you will be able to do more complicated and interesting designs. Perhaps you might redecorate your dorm room or make a dress using these prints. Block printing is a good hobby and could be developed into a good business. Who knows? There are many possibilities available.

Gretchen A. Wise '59



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TRYMAN



Preparation for a dive

N.Y.S. Conservationist

WHEN the sun lies high on a hot day, what could be more enjoyable than a refreshing swim in the depths of a cool lake. Impossible? Not at all, for that's exactly what a skin diver would do. And, what's more, skin diving enthusiasts have found it unnecessary to go to the ocean or to the Great Lakes to find sport.

They just amble out to one of the New York State Finger Lakes. These lakes, five in number, are all long, narrow, and comparatively deep—perfect for amateur exploring possibilities.

Seneca Lake is the deepest and is reputed to be the coldest. The largest of the Finger Lakes, it is thirty-four miles long and two miles wide. Oneida, a close second, is twenty-one miles long and four to five miles wide. Onondaga Lake at Syracuse is the smallest of the lakes extensively used for skin diving.

"But aren't the lakes too cold?" the more timid ask. It is rumored that part of the glacier that dug these geographical fingers still lies in the lakes' deep recesses. Divers in Seneca Lake, probably the coldest of the five, have answered this question. Weather permitting, mid June to September make good skin-diving months. And, the diving period can be prolonged to include April to November with the use of a special diving suit.

What is a skin diver? By current definition, he surface dives aided by fins, snorkel, and a face mask. However his time underwater is limited. Unlike the "frog men" he doesn't carry his own air supply. Aided by air tanks, the diver can remain underwater much longer and of course dive much deeper.

Each piece of equipment has a special purpose. Swim fins enable the diver to swim faster. They are inexpensive and readily available. The snorkel is a bent breathing tube, which when placed in the mouth, enables a diver to breathe when swimming face down. The face mask is a large piece of shatterproof glass edged with a soft rubber skirt. It covers the eyes and nose of the diver enabling him to see better. When the water is cold, the diver may wear a special rubber suit and additional clothing beneath it if necessary. In addition to this the diver may carry weights to make diving easier and a knife. While there are no dangerous fish in these lakes, there is also a possibility of becoming entangled in seaweed or lost fishing lines.

Skin Adventure

Someone is always going to ignore the weather and that someone turned out to be a Long Island club that comes to the Lakes yearly as guests of the Finger Lakes Skin Diving Club at Geneva. The only problem they didn't have was finding a diving site. A foot and a half of ice took care of that. The March 5, 1956 issue of *Life* magazine ran a photograph of the effort with the caption: "Who's that knocking through the ice?"

Organized clubs have appeared on the northern end of Canandaigua Lake, in Geneva, at the northern end of Seneca Lake and in Syracuse. The Aqua-Kings of Syracuse use Oneida Lake, ten miles to the northeast, Jamesville Reservoir, seven miles south and Onondaga Lake, within the city limits.

Of the several organized clubs on the Finger Lakes, the one in Geneva has the best set-up in the region. Its founder and most active member today is George Lohr



skin diving ture the Deep

By EDWARD J. RICE

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George Lohr

who became interested in diving four years ago. In the summer of 1953, George bought the first hydropak in the area and headed for Florida to pick up the finer points of the skin diving art.

The club was founded the following year. Mr. Lohr rented a building in the canal inlet for a club room, diving school, and storage for diving gear. When a law was passed in 1956 making spear fishing illegal, activity naturally dropped off. However, the members turned to photography and exploration for their under-water adventure.

The Finger Lakes lend themselves to under-water explorers very well. For the most part, they have limestone walls and some have deep caves and curious rock formations. Some of the lakes have the depth to tempt the more daring and a myriad of fish to touch and see—bass, carp, pickerel, and Northern pike frequent the lakes and adjoining waterways.

N.Y.S. Conservationist



Diving Equipment

N.Y.S. Conservationist

1—Single hose regulator on tank of compressed air; 9 Two hose regulator on tank; 18—Single hose regulator with full face mask attached to tank; 2—Socks; 3—Hood; 4—Pants; 8—Shirt of neoprene foam "wet-suit"; 6, 10—Marking buoys and flags; 5—Gauge for checking tank air pressure; 7—Talc for dusting suit for easier dressing; 11—Weight belt with quick release buckle; 12—Liquid filled compass; 13—Emergency float pack; 14—Water proof watch case; 15, 16—Depth gauges; 17—Stainless steel knife; 19—Plastic chart of recommended U.S. Navy decompression rates; 20—Water proof plastic camera case with glass front; 21—Goggles (not recommended for deep diving); 22, 23—Fins with heel straps; 24—Open toe shoe fins; 25—Mask with shatterproof glass; 26—Mask with built in snorkel air tubes; 27—Spear gun (not legal in fresh water in New York State). Hand spears may be used for taking certain species of fish in waters open to spearing. Check with local game protector or spearing order regularly issued by the Dept.; 28, 29—Snorkel air tubes. Snorkels of 26 and 29 have float plugs that close opening of tube when submerged and maintained in an upright position.

WARNING: HOME MADE OR CONVERTED EQUIPMENT IS OFTEN DANGEROUS AND SHOULD BE AVOIDED.

What about the future? The Geneva Club has purchased the land across the canal from the club house and a state park will soon rise from the now marshy land. Thus, the club will probably have an invasion of visitors.

The 100 members are of two types, active divers and boatsmen. This is an enjoyable merger—the diver has access to the offshore locations, whereas the boatsman has found a purpose, a sort of allied excitement to his boating. When a boat is available, there is no limit to the possible diving sites.

Seneca, Cayuga, Onondaga, and Oneida Lakes are connected by the Barge Canal and therefore enable access to the Atlantic Ocean by way of the Hudson River. Small craft can explore the regions south of the Finger Lakes by using rivers that fan out from the base of the Lakes.

Skin divers find much pleasure in the recent discovery. For many years we believed the ocean afforded the only water in which to dive. Because of distance, "once-a-year diving" prevailed. Now, however, weekends abound with activity, both at our clubs and in the water. No more unbearable hot days for us, not with skin diving in the Finger Lakes at hand!

Crops from the Desert

By GERALD P. HIRSCH '59

Editor's Note: This month marks the tenth anniversary of the founding of the State of Israel. In the past decade this small nation has developed its resources at a fantastic rate. The following article is a quick resume of Israeli agricultural growth.

ISRAEL is being transformed from a nation of barren desert to a "land of milk and honey."

The milk comes from large herds of black and white Holstein-Freisians, housed in modern, well-kept barns or grazed the year around in lush pastures. One recent visitor to Israel came back with the impression that "the modern dairy husbandry of Israel, perhaps more than anything else, symbolizes in a prosaic sense the great renewal, the new birth, the renaissance of the country." Many say that the dairy industry in Israel compares favorably with that of the classic dairy countries of Europe, Denmark and Holland, and with top dairy states in the United States.

Israel's dairy industry took a long time to develop. First the original Arab cows were disposed of and French and Syrian ones were imported. A great deal of cross-breeding was carried on. Many of the imported Holsteins fell prey to the climate and prevalent diseases. Many of the early cattle imports died. Finally veterinarians were called in to end the scourge.

It has been estimated that 1,000 purebred cows and 150 bulls had been imported from Holland from 1923 to 1953. Importations from America began in 1947 when 70 Holstein heifers and 12 bulls were brought over from Canada. Thousands of head of cattle have since been imported from the United States, helping to make the dairy industry the third most important agricultural endeavor in the state.

Raising beef cattle is another upcoming form of agriculture in Israel. The combination of a heavy demand for meat with insufficient imports due to lack of foreign currencies, has spurred this industry onward. Beef cattle are still raised on a small scale, 15,000 head in 1956, mostly Santa Gertrudis.

The site of all this growth is on the eastern slope of the Mediterranean Sea—an area about the size of New Jersey and made up of 60 per cent desert. The population of this country is close to 2,000,000, most of them Jewish.

Mild dry summers and rainy winters combine to provide an excellent agricultural climate in this area. The maximum area suitable for cultivation is estimated at 1,375,000 acres, most of which will have to be irrigated.

Aside from livestock, there is a large dependence upon crops. Citrus, deciduous fruits, sub-tropical fruits, bananas, grapes, olives, all sorts of vegetables, grain and fodder crops, tobacco, sugar beets and cane, cotton, groundnuts, and the like have all proved successful. Citrus fruits, especially oranges, are the most important single crop. About 150,000 acres, most of it irrigated, is planted in fruits.

In addition to food plantations, there is a large variety of irrigated field crops. Vegetables and potatoes constitute a very great part of the country's diet. Accordingly, the area of these crops has been increased.

Grapes are grown successfully in all parts of the country, the total area devoted to this crop being 27,500 acres. Wine grapes form the basis of a well-developed wine producing industry.

Deciduous and sub-tropical fruits—apples, apricots, avocados, mangoes, dates, etc.—are grown on about 12,500 acres of irrigated land and the amount is being increased in response to increased local demand.

Bananas were originally grown only in the hot Jordan Valley but the area has recently been expanded to include part of the coastal plain. Total production reached 23,000 tons in 1956, 12,000 tons of it being exported to European countries.

Carob trees, of which thousands are being planted every year in the hills, will eventually provide the country with large quantities of fodder for livestock, making a substantial cut in the use of grain possible.

These crops are excellent examples of the job that research has done in finding the right crop for the right land. All these crops have also found excellent European markets.

Poultry is developing into a significant branch of farming, ranking with dairy and citrus fruit raising in importance. Besides forming a considerable part of mixed farming, specialized large-scale poultry farms have been built, with several thousand birds per farm.

Much desert still remains in Israel but through modern agricultural methods the people are making it bloom.

"Plow-plant" method increases corn yield.

A new planting device from Cornell ag engineers.



Link Lines Research

By NANCY LINK '60

"**PLOW-PLANT**," the new way of growing corn, produced an average of 69 bushels an acre of 14 per cent moisture corn on fifteen experimental plots through New York State. This is compared to 67 bushels an acre of conventionally planted corn.

Plans for the plow-planter, which consist of a fertilizer box and a seed box mounted on a plow, are available from the College of Agriculture's engineering department. Because of the combination of operations, there is less work needed to prepare the land with a savings up to ten dollars an acre.

The corn must be planted a week earlier than normally to gain the advantage of increased yield. A furrow opener placed the seed on the crown at a depth of about two inches. When the corn is six to eight inches high, a cultipacker and weeder must be run over it, followed by application of chemical weed killers. Although it is a foot shorter than other corn at mid-season, it catches up by harvest time.

CO₂ for Fresher Eggs

FIFTY-FIVE milligrams of carbon dioxide in freshly laid eggs keeps them fresh, says Robert J. McVicker, poultry specialist of the New York State College of Agriculture. Therefore, contrary to public opinion, an egg is high quality if it has a cloudy white. The cloudiness is caused by natural carbon dioxide within the egg.

TO seal the pores in the egg shell and prevent the escape of carbon dioxide, producers can spray the eggs with a water emulsion oil or dip them in an odorless mineral oil. Storing the eggs at temperatures of about 55 degrees Fahrenheit will slow down carbon dioxide escape even without sealing.

Crown Rust of Oats

THE USDA has reported that the nation's crop of oats is threatened by new races of Crown rust which may severely reduce yields in 1958. None of the oat varieties on the market are resistant to all the new races although they were bred especially to be resistant to the old form of the rust. Spores are spread rapidly by the wind and are kept alive by plants that grow from seed not intentionally planted. Breeders are trying special methods of cross-breeding but no immediate solution is in sight.

Myrtle - New Disease Detector

MYRTLE is being used by Cornell scientists at the New York State Experiment Station at Geneva to detect insect carriers of the X-disease virus of peaches and cherries. Suspected insects feed on an X-diseased plant and then are transferred to a healthy plant where infection will prove the insect is a carrier. Symptoms of the disease appear in myrtle in four to six weeks compared to the year or more required in peach and cherry trees.

To Big for Too Many

Editor's Note: This article is another in the Cornell Countryman's current series on education.

JUNE is the month when thousands of boys and girls are graduating from high schools and dreaming of their lives at big coed universities waiting for them next fall. The summer months seem too long. They can hardly wait to be out on their own, enjoying the bright social whirl, the excitement of sororities and fraternities, the thrill of being chosen for committees and campus publications, the fun of making new friends.

But somehow the big coed universities have failed to live up to the expectation of their incoming students.

After the delightful newness and excitement of the first months, a freshman realizes that he really is not happy at the university—it is just too large for him. He cannot understand why he ever chose a university over the small college he considered.



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This student did not make his choice of school unthinkingly. He weighed all the pros and cons and even visited the schools. Why should he be unhappy? The normal student, although well adjusted to university life and doing average work, finds that there is something missing at the university.

Just what is wrong with the big universities?

In the first place, the student's social life receives far more emphasis than does the student's academic life. Classes become a place to meet people and to be seen in rather than a place of learning.

There would be nothing wrong with this, if it could be shared and enjoyed by all the students. But, as so often happens at the large university, those who were most popular at high school continue to be the most popular. Those students who need the social experience are left out and become socially isolated.

Social pressure goes even deeper than this. For the girls, popularity is short-lived, since only the freshmen girls are given the social rush. Many girls, by the close of their first years have become pinned, engaged, or married. Those who have not yet gotten their mates begin to be frightened by the thought of spinsterhood. As ridiculous as this sounds, it is not exaggerated and is a serious result of the tremendous social pressures these girls are made to feel.

Dating pressure at the big universities is unique. A girl feels that she will be scorned if she dates anyone but the big, handsome, athletic, car-owning fraternity man. The same is true of college men—they feel that they must date only the prettiest personality-plus girls. This leaves a great many people dateless because they are afraid to settle for "second best." It is the popular students who dictate the social system at the universities.

Sororities and fraternities add to these evils. They increase the social pressure by dividing the students into two groups: the accepted and the unaccepted. Those who need the confidence provided by acceptance into a fraternal order are not always the ones who receive the bids. Houses want only the "best" and, to them, the "best" students are those most like themselves. Different Greek letters mark a student as athlete, brain, beauty, personality. It does not matter what type of person you are—as long as you belong to the group you wear its labels.

Small groups make up a university. Each of these is held together by a common interest and is unaware of the existence of other groups. If an individual should go somewhere without his group, he finds himself surrounded by strangers. The average student becomes anonymous in a large school.



Is this the heart of a university?

How can universities develop citizenship in such a situation? Their size makes this development impossible. Students cannot learn to care for and be interested in people whom they do not know.

Keen competition is met by the average freshman when he investigates membership in clubs and committees and is often discouraged. There are so many students who seem better equipped for the job that he eventually loses interest. Since there is no shortage of applicants, organizations do not encourage people to persevere.

It is disappointing for the freshman who is looking for a close relationship with his professor to find himself in a huge lecture hall with several hundred others, listening to a cold and impersonal lecturer. The professors are certainly not at fault; university-sized lectures are a far cry from classes of 15 to 20 students, where each student is given the chance to be an interesting individual.

Guidance also suffers because of the size of universities. If an advisor has to check 160 class schedules, how can he have the time to get to know the students in his care? Moreover, the student who gets to see his advisor only for the semi-annual five minute meeting cannot become well enough acquainted with him to feel free to go to him with personal problems.

The average student finds himself burdened with adjustment problems that could be easily solved by an advisor who had more time to give.

The four years at the university are supposed to be the happiest of a person's life. But the evils of size are crowding out the happiness of the average student on the university campus, making him wonder if one of the biggest decisions he has ever made was indeed a mistake.

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Open Season on Mosquitoes

By MARTIN U. OWOREN '60

SUMMER is the season for mosquitoes, the most persistent annoyers of man among the world's insects. Although most prevalent in the tropics, these vicious pests are found throughout the world. Only a few of the extensive forms, however, are appreciably detrimental.

Aedes, *Anopheles*, and *Culex* are the genera containing the most obnoxious of the pests. All have similar life cycles, but marked differences in their structures and breeding places make it fairly easy to distinguish them from one another—but not from the many kinds of harmless mosquitoes.

Aedes mosquitoes are characterized by silver stripes on their bodies; the *Anopheles* by their slanting rest position and the *Culex* by the position, parallel to the surface, which they take when at rest.

Entomologists have little doubt that, among mosquitoes, it is only the female that sucks blood and that the males are, for the most part, vegetarians, but prone to alcoholism. It is difficult, however, to distinguish between the bloodsuckers and the alcoholics. The main differences are the more feathery antennae and the shorter, weaker proboscises of the males.

Malaria was the first human disease traced to insect carriers. In 1880 Laveran, a French surgeon, isolated the protozoan blood parasite which causes this disease. In 1898 Ross found the malarial parasite in Indian *Anopheles* mosquitoes.

This mosquito picks up the protozoan parasite by sucking the blood of an infected person. This protozoan, after

undergoing a series of changes, penetrates the mosquito's stomach wall and forms spore-containing nodules. When these nodules burst, the spores are freed to enter the insect's salivary glands and be transmitted to a healthy host. The parasites winter in human hosts and are transmitted in summer when warm weather again brings out the *Anopheles* mosquitoes.

Yellow fever, a virus disease, is also spread by mosquitoes—*Aedes* this time. Not until early in the 20th century, when Walter Reed and a group of other United States Army doctors conducted their experiments, was it known that yellow fever was transmitted by insects.

Another essentially tropical disease, filariasis, is transmitted by a species of the genus *Culex*. The cause of this disease is a nematode which remains buried in the blood and lymph vessels of the host during the day but is present in the peripheral blood vessels during the night and can then be obtained by mosquitoes sucking the blood of an infected person.

These nematodes incubate in the mosquito for two or three weeks and then are injected into a healthy person. Here they become sexually mature and produce numerous microscopic filarities which enter the circulatory system and live in it for a long time. The presence of these parasites may "clog" the vessels and cause the swelling and disfiguration known as elephantiasis.

Mosquitoes are known to possess poison glands located between two salivary glands but there is no agreement among scientists on their use. One theory is that the poison is injected into an animal or man and it promotes blood suction by preventing or minimizing blood coagulation.

War against these pests is being fought in two ways: breeding has been hampered by draining their breeding grounds or spraying them with insecticides, and many of the mosquitoes' natural enemies are being actively propagated.

Unexpected Guests?

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Letters to the Editor

Ed. note: In response to our March Countryman which featured an article on Liberty Hyde Bailey, Rolla Van Doren '06 wrote us of his memories of Cornell in Bailey's time. Mr. Van Doren operated the farm he was born on for 47 years and has just recently retired to Chaumont, New York.

Dear Cornellians:

Your March issue and the reproduction of old photographs spurs me to write you. Aside from Dean Bailey at the plow there is but one face in the picture that seems familiar, and I cannot put a name to it. But out of the picture were about fifty students holding a rope attached to the plow. Soon after this picture was snapped, Dean Bailey was having difficulty in keeping his footing and that plow in the ground as the students pulled the rope.

Somewhere in that group holding the rope probably were the Cornellians I shall mention, for in those days we were apt to be together.

M. C. Burritt '08—former director of extension at Cornell and later public service commissioner in New York State. He is retired and living at Coral Gables, Florida.

Henry Jennings '06—potato and vegetable grower at Southhold, Long Island.

Wilmer W. Bassett '07—engaged in nursery business at Monticello, Florida. He is now changing to dairy.

Benjamin Frary '13—bought a farm near Homer, N. Y. in 1916, sold it to his son-in-law a few years ago and now divides his time equally between Homer and Florida.

George T. Reid '06—after a few years as county agent in New Jersey, began farming with his son at Mount Holly, New Jersey.

Jesse T. Van Doren '20—farming at Chaumont, N. Y. and he is now acting postmaster of the town.

And then come memories of the faculty, especially H. H. Wing, J. E. Rice, J. L. Stone, Mr. Tailby out at the farm, Mr. Hunn at the greenhouse, talks by I. P. Roberts, Anna Botsford Comstock, and Martha Van Rensselaer.

—Rolla Van Doren

Liberty Hyde Bailey at the plow.



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


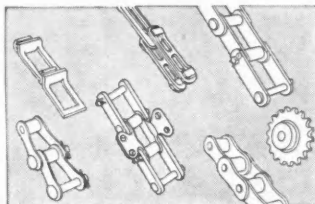
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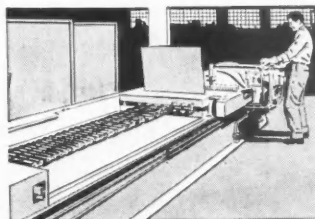
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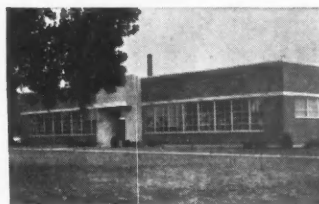


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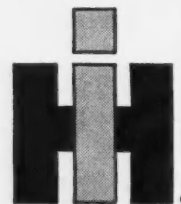


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